



**Central and Eastern Europe, Commonwealth of
Independent States and the Baltics Region**

**2005 Report for USAID
Latvia & Lithuania
USI/IDD Elimination**

December 2005

Progress Report for USAID

Assisted Country: Central and Eastern Europe, Commonwealth of Independent States and the Baltics Region— Latvia and Lithuania

Assisted Programme(s)/project(s): IDD Elimination/ USI

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Total contribution pledge amount: US\$ 90,000

Programmable amount: US\$ 81,819

Funds used to date: US\$ 69,023.64 (**note: Emory University payment of US\$15,606.74 is being processed. This amount is included in the funds used).**

Balance of funds available: US\$ 12,795.36

Duration of contribution: 01 October 2004 – 30 September 2007

Period covered by report: January- December 2005

Date prepared: December 2005

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

HPSA	Health Promotion State Agency(Latvia)
ICCIDD	International Council for Control of Iodine Deficiency Disorders
ID/IDD	Iodine Deficiency/Iodine deficiency Disorders
LFC	Latvia Food Centre
MoH	Ministry of Health
MI	Micronutrient Initiative
NATCOM	UNICEF National Committee for UNICEF
NFNPA	National Nutrition Food and Nutrition Plan of Action
NNC	National Nutrition Center (Lithuania)
NPHS	National Public Health Service (Lithuania)
PAMM	Program Against Micronutrient Malnutrition
TSH	Thyroid Stimulating Hormone
USI	Universal Salt Iodisation
WFFC	World Fit for Children
WHO	World Health Organisation

Executive Summary

This is the final year of UNICEF programme cooperation in Latvia and Lithuania. Both Latvia and Lithuania are members of the European Union, and both have surpassed the indicators established by UNICEF for further programme cooperation.

In Latvia, the Ministry of Health submitted to the Cabinet of Ministers a proposal for the sale of only iodized table salt at retail level, however, due to an adverse public response, which was seen in consumer panic buying of non-iodized salt, the proposal was withdrawn and the Ministry of Health confirmed that no specific mandatory measures would be proposed in the near future. The voluntary approach of consumer choice would continue. Communications and advocacy efforts continued with medical professionals and representatives of the bread industry, in the expectation that specific measures may be re-considered in the near future. **In Lithuania**, by an order of the Minister of Health of 22 April 2004, the Hygiene Norm on Hygiene for Foodstuffs was amended to include that “all food retail outlets, catering and bakery establishments shall use only iodized table salt” effective from 1 January 2005. A household utilization of salt survey, undertaken by the National Nutrition Centre during August-October 2005 confirmed increased use of iodized salt--67.8% of households were using iodized table salt. Regular monitoring of iodized salt use in the bread industry also confirmed that the MoH Orders were fully implemented. The goal of sustainable elimination of iodine deficiency will not be reached in either Latvia or Lithuania at the end of 2005, however, in the case of Lithuania, the systems are in place to achieve the goal in the near future.

The total programmable allocation was \$ 81,819

The total expenditure as of 14 December 2005 is \$69,023.64

Balance of funds is US\$12,795.36

Background:

UNICEF's advocacy for the introduction of measures to address mild iodine deficiency in Latvia and Lithuania dates to the late 1990's. Initially, baseline studies on urinary iodine levels among school going children, following the WHO methodology, were undertaken and confirmed that both countries are classified as “mild” iodine deficient. Representatives from both countries participated in regional consultations on the strategy of universal salt iodization (USI) in 1999 and 2000. During 2000-01, both countries organized national communications campaigns to promote awareness on the importance of iodine nutrition and use of iodized salt. By 2003, both countries included the goal of elimination of iodine deficiency in their respective national Food and Nutrition Plans of Action. In 2004, in both countries, analysis of thyroid stimulating hormone (TSH) data collected from newborns was initiated as a low cost method to monitor ID. The results confirmed that mild iodine deficiency continued in both Latvia and Lithuania. And in 2004, both countries proposed mandatory measures on the import of only iodized table salt, as the strategy to achieve the national goal of elimination of IDD, as outlined in the respective National Food and Nutrition Action Plans. In February 2004, based on the plans in Latvia and Lithuania to introduce the mandatory sale of only iodized table salt, consumers in both countries rushed to shops, buying up all stocks of non-iodized salt, placing in jeopardy the proposed new measures. In the case of Lithuania, this did not deter the Ministry of Health from action, and in April, the Minister of Health issued an amendment to the Hygiene Norm on Hygiene for Foodstuffs which provided that “all food retail outlets, catering and bakery establishments shall use only iodized table salt” effective from 1 January 2005. In the case of Latvia, a similar Health Order was issued, however, as it was after Latvia joined the European Union, the Orders

needed to be reviewed by the European Health Commission (EHC). The Orders were therefore pending at the end of 2004.

2005: In Latvia, a final response on their proposed changes in the Food Law related to the import of only iodized table salt, was received from the EHC early in the year. There was no objection to the measures proposed. The Ministry of Health therefore submitted the proposal to a meeting of Secretaries of the Cabinet of Ministers in June and the proposal was recommended for submission to the Council of Ministers for approval. However, at that time, adverse information on iodized salt was reported in the media, including that iodized salt would have a negative affect on traditional pickling. In addition, a small group of endocrinologists refuted the national research results which indicated that iodine deficiency was a problem requiring mandatory measures. Among this group, there was also a rejection of research that indicated IQ loss of the child was possible due to iodine deficiency of the mother during pregnancy. The Health Promotion State Agency (HPSA) briefed the media on the importance of iodine nutrition, the negative affects of iodine deficiency among women and children, and the positive benefits of iodized salt, based on global experience. However, the media focused on what was seen as the negative consequences of iodized salt and the loss of consumer choice. The result was a consumer revolt—a rush to purchase all remaining stocks of non-iodized salt from retailers, leaving behind iodized salt. Without a consensus among medical experts on the need for mandatory measures, and a public which rejected iodized salt, the Minister of Health withdrew the proposal for mandatory import of only iodized table salt. The voluntary approach of consumer choice was decided, at least for immediate future. It is noted that national parliamentary elections are planned in 2006, and that it is unlikely that any further action would not be considered before that time.

In Lithuania in 2005, the amendment (Article 16) to the Lithuanian Hygiene Norm HN 15:2003 “Hygiene of Foodstuffs” resulting in the Order No. V-255 of 22 April 2004 (published in the Nation Gazette No 70-2459 of 2004) set new requirements for mandatory iodization of salt as follows: “ With the aim of protection of public health against the diseases might be caused by iodine deficiency existing the geographical region of Lithuania, all food retail outlets, catering and bakery establishments shall use only iodized table salt which contains 20-40 mg/kg of iodine.” This Amendment came into force on 1 January 2005. Based on monitoring reports it was found that iodized salt was being utilized in the bread industry and that at retail level, only iodized table was being sold.

No serious objections to the new measures arose in Lithuania during the year. Based on feedback from the Director, National Nutrition Center, this was due to the process adopted for introducing these new measures to the public. Initially in 2003, the Ministerial Orders were issued first recommending wide use of iodized salt. This resulted in extensive discussions with the private sector and medical professionals on the reasons for the recommendation. As the Government moved to make the measures mandatory, extensive discussions were held with members of Parliament and medical professionals on the need for mandatory measures. In addition, throughout this period, new information materials were provided to the media and for primary health care doctors. A series of consultations with doctors, and the private sector provided the opportunity to discuss the new measures, respond to all questions, and to reach consensus. Therefore, the implementation of the Amendment to the Hygiene Norm proceeded smoothly.

Programme Objectives:

The Multi-Country Programme (2003-2005) which covers Bulgaria, Croatia, Latvia and Lithuania, includes the achievement of the World Fit for Children goal of sustainable elimination of iodine deficiency by 2005. The focus in 2005 in Latvia and Lithuania was on

the development and expansion of policies and programmes for iodine nutrition, national legislative action on the mandatory import of iodized salt for human consumption, promoting a demand for iodized salt through public information and communication activities, and monitoring and evaluation activities.

Activities supported by UNICEF-2005 and results

Latvia: The areas of UNICEF cooperation included:

- National consultation with 40 specialists and primary health care doctors on the problem of iodine deficiency in Latvia and the identification of measures for its elimination, organized by the State Health Promotion Agency in cooperation with the Endocrinology Society
- Advocacy on use of iodized salt in the bread industry including a study tour to the Netherlands for a national delegation followed by a national consultation, organized by the Latvian Food Center, for 30 representatives of the food industry
- Technical support by two leading experts on elimination of IDD, Prof. Frits van der Haar, Emory University, USA and Prof. Peter Laurberg, Aalborg University, Denmark. Ms. Christine Grit, of the Bread Producers Association, The Netherlands provided the experience of the bread industry in that country.
- Production of communications materials on iodine nutrition and the importance of iodized salt for mass media, and specific materials for primary health care doctors and nurses;
- Analysis of TSH data 2003-2004 and the Report Assessing Iodine Status in Latvia 2000-2004.

Conference for Health Care Providers: The situation of iodine deficiency in Latvia, including comparisons with other countries in Europe, and implications on the healthy development of children were presented by the President of the Endocrinology Society, the WHO Liaison Officer, representatives of the Ministry of Health and the resource person, Prof. Peter Laurberg¹, Aalborg University, Denmark, who outlined the situation of iodine nutrition in the country and the measures in place for its elimination through the wide use of iodized salt. The presentations were followed by small group discussions among the participants on measures proposed to eliminate IDD. The verbal reports from these discussions reflected a wide range of opinion. Some medical professionals felt that there was not a problem of iodine deficiency in the country, in spite of the data presented. Some faulted the research undertaken. Some questioned the extent that iodine deficiency can affect the brain development of the fetus. And, some, including the President of the Endocrinology Society felt that there is a problem of iodine deficiency in Latvia, which does require measures such as the use of iodized salt and its use in food products. While a consensus on measures which need to be considered in Latvia to better address iodine deficiency was not achieved, this meeting provided the first opportunity for health professionals to discuss the situation in the country.

Study Tour to The Netherlands: The purpose of the study visit to the Netherlands was to exchange experience between Latvia and The Netherlands, which have a similar situation of mild iodine deficiency and to share information on the approaches adopted to address the problem. The Netherlands was recommended for the visit as it is a country which has implemented several approaches for addressing iodine deficiency, at one point mandatory legislation which was later converted to a voluntary approach, including voluntary use of iodized salt by all major bread producers.. Widespread use of iodized salt in the population is reported as well. The Latvian delegation comprised of representatives of the Latvian Federation of Food Enterprises, the Executive Director of the Latvian Bread Association, a

¹ Prof. Laurberg's participation was through collaboration with ICCIDD.

representative of a leading food producer, the Head, Department of Food Technology of the Latvian University of Agriculture, and Head, Epidemiological Safety, Food and Nutrition, Ministry of Health Department of Public Health. A representative of the UNICEF Regional Office CEE/CIS and Baltics accompanied the delegation. Visits included the Ministry of Health, leading bread producers and a salt producer. Presentations made at the Conference for the Food Industry (below) indicated a positive view by the participants on the use of iodized salt in Latvia.

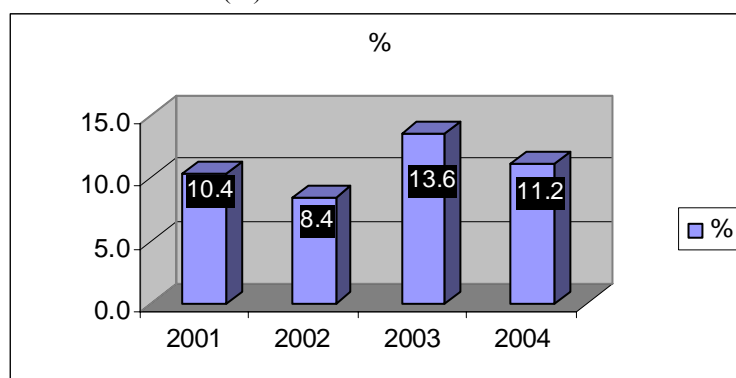
The Conference for Food Processing Industry looked at the part of the edible salt imports in Latvia that is purchased and used by the food industry. At the Conference, most of the time was dedicated to discussing the experience of the delegation visiting the Netherlands and placing their observations and findings within the practical context and reality of the food industry in Latvia. The information from the literature and of local experimentation was perceived as reassuring. Studies were cited of successful experience in Latvia of inclusion of iodized salt in the production and/or processing of bread, cheese, meat, canned foods, preserves, condiments, animal foods, and so on. Interestingly, the cost issue was not raised as an obstacle against the use of iodized salt. For the small bakeries, known to be operating with a very small profit margin, cost was not seen as an un-surmountable barrier.

In conclusion, the food industry representatives attending the Conference largely shared an opinion that the industry is willing and ready to collaborate with others to reach the national goal of elimination of IDD. However, some legitimate concerns of food companies were raised, such as agreement on criteria and practicalities of labeling, required endorsements by food quality regulators and efforts to raise the overall level of acceptance among customers and the public. It was noted that the Ministry of Health would need to initiate the collaboration process and make a proposition for consideration by the food industry. There appeared a consensus that there was basically no problem in their adopting the use of iodized salt, however, without a firmer recommendation by the Government and the medical specialists, this would be difficult to implement, in view of the current negative public opinion of salt iodization.

Analysis of TSH Data (2003-2004) and Report Assessing Iodine Status in Latvia-2000-2004: The Latvian Food Centre analysed, in cooperation with the Genetic Centre, University of Latvia, TSH data collected from newborns, 2003-2004 and analysed the results together with the findings of the 2004 report which analyzed TSH results 2001-2002.² The report concludes: “The national neonatal TSH screening data from 2001 – 2004 leads to the conclusion, that Latvia, according to the WHO/UNICEF/ICCIDD guidelines, can be characterised as **a country with mild iodine deficiency**. Using TSH as an IDD indicator, TSH prevalence is quite stable from 2001 to 2004 and there is no tendency, that IDD as a health problem are solved. Refer Table 1 below.

² Neonatal Thyroid Stimulating Hormone Screening in Latvia: A Tool for Classification and Monitoring of Optimum Iodine Nutrition covering newborns from 2001-2002, Ruzan H. Gyurjyan, graduate student, Emory University, and Intern MoH-Latvia.

Table 1:
New-borns (%) with TSH >5 mIU/L in Latvia 2001 – 2004



These findings suggest that developing brains of newborns are at risk from the detrimental effects of iodine deficiency. The results presented together with information available suggest the need for effective intervention programs in Latvia.” This Report was provided to participants in the two Conferences as well as to the Ministry of Health. Annex 2 provides more detailed tables.

Communication materials were prepared specifically for primary health care doctors and nurses on iodine nutrition to ensure that they were equipped with correct information. The material was developed by the HPSA together with the President of the Endocrinology Society and included the recommendation that families be encouraged to utilize iodized salt in the home.

In conclusion, while the goal of elimination of iodine deficiency in Latvia will not be met in the near future, there is improved awareness among medical professionals and representatives of the food industry on the importance of iodine nutrition, the situation of iodine deficiency in Latvia and effective measures to improve the situation. A collection of excellent reference materials were prepared for the two Conferences and were placed on the website of the HPSA. Following the two national conferences, the head of the Gynecologist Association has approached WHO for a presentation on iodine nutrition at the next annual conference; requests for the research findings were also made by the food industry.

The final UNICEF programme visit to the country provided the opportunity to advocate for national action with representatives of the Ministry of Health as well as the Minister for Children and Family Affairs. The WHO Liaison Officer also committed herself to pursue specific measures during the coming two years. The UNICEF final report to Government: *Meeting the Best Interests of the Latvian Child*, widely distributed to both Government and civil society also recommends continued Government consideration and action to eliminate iodine deficiency.

Lithuania

The areas of UNICEF cooperation in 2005, towards sustaining national measures on the mandatory import of only iodized table salt and use of iodized salt in the bread industry, included:

- Research including national study on household level utilization of salt, analysis of TSH data (Jan-June 2005), and urinary iodine levels among school going children
- Conference on use of iodized salt in schools and incorporation of iodine nutrition in the school curricula
- Exchange of experience: participation in the 18th International Congress of Nutrition in Durban, South Africa

- Production of information materials for medical professionals and for pregnant women on the importance of iodine nutrition
- Technical consultation with medical specialists on iodine nutrition

Research activities: A national study on the use of iodized salt was undertaken during August – October 2005 by the National Nutrition Center. 1000 respondents were selected, based on the license issued by the State Population Register under the Ministry of Interior for a randomized sample of the population. The results indicated that 67.8% of households were using iodized salt. An improvement over previous studies is seen, e.g. less than 10% of households used iodized salt in 1998, which increased to 39% in 2002. It was felt that among the 32% non-users of iodized salt, stocks of non-iodized salt was still available in the home from previous purchases. Utilization of iodized salt was highest among households in which the interviewed person was aged 35 or older, those with a secondary or higher education level, those employed and urban residents. Annex 3 provides details of the survey findings.

The analysis of TSH data collected for the first 6 months of 2005 pointed to trends similar to those found in 2004. The final analysis for 2004 showed that out of 29,226 newborns studied, 1,545 or 5.28% had elevated TSH levels. Among those borne during the period January to June 2005, out of 14,428 births studied, iodine deficiency was reported among 690 infants, 4.78% of newborns. The data for the balance of 2005 will be analysed at the end of the year through the State Genetics Centre, in cooperation with the National Nutrition Centre as part of the national monitoring systems. The University of Lithuania, Kaunas, undertook a study on urinary iodine levels among 600 school children as part of national monitoring systems. However, constraints arose at the time of data analysis, requiring the need to send the samples for external testing. As the results could not be processed this year, the University has committed itself to secure the results in 2006. Annex 4 provides details as submitted by the National Nutrition Centre.

Iodine Nutrition in Schools: A Seminar was held with 70 representatives of the school system, including 10 Regional Directors of Education, school administrators, school nurses, and school cooks from major municipalities to ensure use of iodized salt in schools. While the legal act was mandatory on all public establishments, it was reported that the participants appreciated the Seminar which helped them to understand the rationale and its relevance to school children. The Seminar concluded that the reference materials presented needed to be made available to all schools and this was undertaken by the NNC. An analysis of the school curricula found that iodine nutrition was not referred in any current class syllabi nor in the teaching materials. A process to prepare appropriate materials for use in the curricula was initiated, but could not be completed this year. However, a new partnership has been formed between the Ministry of Education and the NNC and it is expected that content on iodine nutrition and the importance of iodized salt will be incorporated in teaching materials from 2006.

Exchange of Experience: Two representatives, one of the NNC and the second from Kaunas University participated in the 18th International Congress of Nutrition in Durban, South Africa. Two poster presentations were prepared: Iodine Dietary Patterns in the Lithuanian Population and Breast Feeding Status in Lithuania, abstracts of which were included in “Annals of Nutrition and Metabolism” (September 2005, 49 (Suppl. I p. 155 and p. 324.) which was published. The delegates appreciated the opportunity to attend the meeting noting that the two sessions, “infant and young child feeding” and “specific micronutrient deficiency” were of relevance providing new ideas for national action.

Production of information and advocacy materials: 500 copies of a leaflet on iodine nutrition was prepared and distributed to PHC doctors. In addition a leaflet for pregnant

women (23,000 copies) which included the importance of breastfeeding and iodine nutrition was also distributed through PHC centres. A technical article on iodine deficiency, the results of the TSH data analysis, and its impact on children in Lithuania was prepared and published in the leading monthly medical newspaper, read widely by all medical professionals in Lithuania.

Consultation with national experts: A final consultation, held with medical experts, representatives of the Ministry of Education and Science, schools, public health units, reached a consensus on the need to continue efforts to promote iodine nutrition through use of iodized salt. The Ministry of Education confirmed that these issues would be integrated in the school curricula from 2006; the University confirmed that iodine medical curricula would likewise be reviewed and strengthened to ensure this is adequately covered. The importance of ongoing measures to monitor the situation of infants (TSH analysis) and among children through the commitment of Kaunas University to monitor urinary iodine were confirmed.

In conclusion, there is a national commitment to reach the goal of elimination of iodine deficiency, with a sound legal framework, systems for monitoring in place and a communications programme which has involved not only medical professionals, but schools, and the public directly. While the goal of elimination of IDD by 2005 has not been achieved, we are confident, with the sustained actions agreed by government, the goal will be achieved in the near future.

During our final programme visit to Lithuania, the achievements in this area were discussed with the Prime Minister and the Minister of Health. There was a commitment to continue this effort. In addition, in the final report of UNICEF: *Meeting the Best Interests of the Lithuanian Child*, the importance of expanding the achievement, towards the goal of IDD elimination was highlighted.

Counterparts and collaboration

The main programme partners have been:

Latvia: Ministry of Health, Health Promotion State Agency, Latvia Food Centre, Endocrinology Society, WHO Liaison Office, ICCIDD, Emory University, Latvian National Committee for UNICEF,

Lithuania: Ministry of Health, National Nutrition Center, National Public Health Service, University of Lithuania-Kaunas, Ministry of Education and Science, WHO Liaison Office and Lithuanian National Committee for UNICEF

At the Regional level, the UNICEF Regional Office in Geneva manages the Multi-Country Programme (2003-2005) which includes Latvia and Lithuania. At the Regional level, collaboration with WHO, PAMM, the MI, ICCIDD, MOST, and in particular the funding provided through USAID, are noted with appreciation.

Country	Latvia
Total Population	2.8 million
% of Households using Iodized Salt	Est. 15% (2004)
Target Population under Proposal	Total Country Population
USAID FY'2005 Funding (year(s) and amount)	2005-\$44,900

Program Area	Major Activities	Milestones	Indicator		Budget
			Baseline	Target	US\$
Commercial/Industry <ul style="list-style-type: none"> • Technical assistance • Production Efficiencies & Cost Reduction • Quality Assurance & Control • Marketing 					
Equipment & Supplies <ul style="list-style-type: none"> • Donations & Subsidies • Credit/Loans • Revolving Funds • Installation & Maintenance Note: USAID funds cannot be used for the direct purchase of equipment or KIO3/KI					
Public Sector/Government <ul style="list-style-type: none"> • Legislation • Regulations/Standards • Monitoring & Enforcement Procedures, Roles & Responsibilities, Penalties • Registration of Non-Iodized Salt Users • Industry Tax/Duty Concessions • IEC/Social Marketing • Links to Other National Fortification Activities 	TSH analysis and Report on Iodine Deficiency-2000-2004 Conference for medical professionals				1,260.16 9,383.00
NGO/Civil Society <ul style="list-style-type: none"> • Consumer Acceptance, misconceptions 	Study visit to Netherlands on USI Conference with Food Industry				4,195.85 2,757.84
Personnel <ul style="list-style-type: none"> • Staff Positions • Short-term Consultants 	Institutional contract-Emory University				22,994.74
Total					US\$40,591.59

Suggested Indicators: UNICEF to provide Baseline & Targets (cite data source).

Annual Production of Iodized Salt (MT)						
	2004		2005		2006	
	Target	Actual	Target	Actual	Target	Actual
Human (retail and food)	NA		NA		NA	
Livestock						

% of Households Consuming Iodized Salt (only mention national surveys and % >15 ppm)					
2004		2005		2006	
Target	Actual	Target	Actual	Target	Actual
70%	15%	90%	15%		

Finbalt Study Report 2004, HPSA-Riga, Latvia

Country	Lithuania
Total Population	3.4 million
% of Households using Iodized Salt	67.8%
Target Population under Proposal	Total Country Population
USAID FY'2005 Funding (year(s) and amount)	US\$36,919

Program Area	Major Activities	Milestones	Indicator		Budget
			Baseline	Target	\$US
Commercial/Industry <ul style="list-style-type: none"> • Technical assistance • Production Efficiencies & Cost Reduction • Quality Assurance & Control • Marketing 					
Equipment & Supplies <ul style="list-style-type: none"> • Donations & Subsidies • Credit/Loans • Revolving Funds • Installation & Maintenance <p>Note: USAID funds cannot be used for the direct purchase of equipment or KIO3/KI</p>					
Public Sector/Government <ul style="list-style-type: none"> • Legislation • Regulations/Standards • Monitoring & Enforcement Procedures, Roles & Responsibilities, Penalties • Registration of Non-Iodized Salt Users • Industry Tax/Duty Concessions • IEC/Social Marketing • Links to Other National Fortification Activities 	Seminar with education representatives				3,216.18
	Information materials for pregnant women and PHC staff				4,710.29
	National Household survey on salt use				4,027.67
	UI study- thyroid gland volumetary study among school children				6,830.66
	Experience exchange- International Nutrition Congress; programme monitoring				9,647.25
NGO/Civil Society <ul style="list-style-type: none"> • Consumer Acceptance, misconceptions 					
Personnel <ul style="list-style-type: none"> • Staff Positions • Short-term Consultants 					
Total					28,432.05

Suggested Indicators: UNICEF to provide Baseline & Targets (cite data source).

Annual Production of Iodized Salt (MT)						
	2004		2005		2006	
	Target	Actual	Target	Actual	Target	Actual
Human (retail and food)	NA					
Livestock	NA					

% of Households Consuming Iodized Salt (only mention national surveys and % >15 ppm)					
2004		2005		2006	
Target	Actual	Target	Actual	Target	Actual
		90%	67.8%		

National Household Survey, 2005, National Nutrition Centre, Vilnius, Lithuania

Annex 1: Financial Summary

YEAR 2005

Requisition Ref.	Description	Value US\$
CRQ/SWZK/2005/251	Health Promotion State Agency – IDD activities including leaflet for PHC doctors, media spots	8,500.00
CRQ/SWZK/2005/478	Latvian Food Center – Conference and TSH analysis Report	3,200.00
CRQ/SWZK/2005/608	Latvian Food Center – Conference for food Manufacturers	818.00
CRQ/SWZK/2005/479	Latvian delegation on study visit to Netherlands	4,195.85
CRQ/SWZK/2005/537	Health Promotion State Agency – Technical Seminar	883.00
SRQ/SWZK/2005/42	Emory University – Technical support – Latvia	22,994.74
CRQ/SWZK/2005/169	Lithuania National Nutrition Center – IDD activities	26,564.20
TA/SWZK/2005/105	Finalization of 2005 proposals with Partners— monitoring mission (March 2005)	1,867.85
	Total expenditure	69,023.64
	Balance available: US\$12,795.36	

Annex 2: Results of TSH Analysis –Latvia

Results of TSH Analysis Latvia³ 2000-2004

Table A. TSH frequencies according to the regions in 2001.

Sample: 19,311 newbornes

Region		TSH		Total
		>5 mIU/L	<5 mIU/L	
Kurzeme	Count	2400	222	2622
	% within region	91.5%	8.5%	100.0%
Zemgale	Count	2171	183	2354
	% within region	92.2%	7.8%	100.0%
Vidzeme	Count	2914	270	3184
	% within region	91.5%	8.5%	100.0%
Latgale	Count	2182	534	2716
	% within region	80.3%	19.7%	100.0%
Riga	Count	7633	802	8435
	% within region	90.5%	9.5%	100.0%
Total	Count	17300	2011	19311
	% within region	89.6%	10.4%	100.0%

Table B. TSH frequencies according to the regions in 2002.

Sample: 19,600 newbornes

		TSH		Total
		>5 mIU/L	<5 mIU/L	
Kurzeme	Count	2588	172	2760
	% within region	93.8%	6.2%	100.0%
Zemgale	Count	2243	207	2450
	% within region	91.6%	8.4%	100.0%
Vidzeme	Count	2825	247	3072
	% within region	92.0%	8.0%	100.0%
Latgale	Count	1996	473	2469
	% within region	80.8%	19.2%	100.0%
Riga	Count	8273	552	8825
	% within region	93.7%	6.3%	100.0%
Other	Count	17	1	18
	% within region	94.4%	5.6%	100.0%
Total	Count	17942	1652	19594
	% within region	91.6%	8.4%	100.0%

³ Extracts from Report Assessing Iodine Status in Latvia 2000-2004 prepared by the Latvia Food Centre.

Table C.. Frequency of TSH screening among new-borns in Latvia in 2003
Sample: 21,078 newbornes

Region		TSH		
		<5	>5	Total
Kurzeme	Count	2498	305	2803
	% within region	89.1%	10.9%	100.0%
Zemgale	Count	2362	303	2665
	% within region	88.6%	11.4%	100.0%
Vidzeme	Count	2899	455	3354
	% within region	86.4%	13.6%	100.0%
Latgale	Count	2054	738	2792
	% within region	73.6%	26.4%	100.0%
Riga	Count	8330	1054	9384
	% within region	88.8%	11.2%	100.0%
Other	Count	67	13	80
	% within region	83.8%	16.3%	100.0%
Total	Count	18210	2868	21078
	% within region	86.4%	13.6%	100.0%

Table D. Frequency of TSH screening among new-borns in Latvia in 2004
Sample: 20,309 newbornes

Region		TSH		
		<5	>5	Total
Kurzeme	Count	2482	178	2660
	% within region	93.3%	6.7%	100.0%
Zemgale	Count	2313	229	2542
	% within region	91.0%	9.0%	100.0%
Vidzeme	Count	2916	401	3317
	% within region	87.9%	12.1%	100.0%
Latgale	Count	2038	592	2630
	% within region	77.5%	22.5%	100.0%
Riga	Count	8235	867	9102
	% within RAJONS	90.5%	9.5%	100.0%
Other	Count	54	4	58
	% within region	93.1%	6.9%	100.0%
Total	Count	18038	2271	20309
	% within region	88.8%	11.2%	100.0%

Annex: 3 - Lithuania

Extracts of the REPORT of the investigation about the usage of iodized salt in Lithuanian households-National Nutrition Center Nov. 2005

According to the agreement between Lithuanian Ministry of Health and UN Children's Fund (UNICEF) and in the order to implement the provision of Action plan for IDD elimination in Lithuania and also having the provision to check the efficiency of updated Lithuanian Hygiene norm No 15 (HN 15:2003 "Food Hygiene, Official Gazette, 2004, No.70-2459), approved by Lithuanian Minister of Health, National Nutrition Center was organized the investigation of usage of iodized salt in Lithuanian population. The study was performed during the period of August – October 2005.

The main objective of the investigation – the evaluation of proportion of Lithuanian inhabitants (in percents), which were used the iodized salt in their households during the investigation period. The provision is to prepare and to implement the further measures to ensure the sustainability of the process and sufficient amount of iodine in consumed food in order to achieve the eventual elimination of iodine deficiency disorders in Lithuanian population, especially in the risk groups – children and pregnant women.

Materials and methods. The State Data Protection Inspectorate after the Advanced Revise in 21 of July 2005 by the order No 2R-1647 (2.6) issued the license for Lithuanian Ministry of Health to operate with personal data of selected Lithuanian inhabitants for scientific purposes (in order to select the randomized group of Lithuanian population). According to this license the State Population Register under the Ministry of Interior constituted the randomized sample of Lithuanian population (its include representatives from 10 Lithuanian districts, at the age of 18-65, 1000 respondents in total, selected according to the density of inhabitants in Lithuanian districts). The approval of Lithuanian Bioethics Committee for the organization of the study was received. For all selected respondents were send the informative letters. The recall of selected respondents was organized by the stuff of Public Hygiene Centers in the districts. The special questionnaire form was filled in the households of respondents, if the respondent agreed to participate in the study. Questionnaire is added.

1000 respondents were randomly selected. The response rate comprised 69%, its mean 690 respondents at the age of 18-65 were examined from 10 Lithuanian district (38.3% and 61.7%, respectively males and females).

The distribution of sample group according to the age: until 30 years – 5%, 30-40 years – 10.4%, 40-50 years – 38.3%, 50-60 years – 31.1%, over 60 years – 15.4%.

The distribution of sample group according to the nationality: Lithuanians – 74.7%, Russians – 10.8%, Polish – 12.0%, others – 2.4%

The distribution of sample group according to the education: primary and not completed secondary – 7.5%, secondary and special secondary – 67.4%, high – 24.1%

The distribution of sample group according to the residence: urban – 77.4%, rural – 22.6%

The distribution of sample group according to the employment: having a job – 70.5%, unemployed – 8.7%, retired – 18.1, house wife's – 2.1%, others – 0.6%

The results and discussion

According to the analysis of the data the iodized salt as a food product used 67.8 % of Lithuanian respondents (72.4% of males and 64.9% of females). 32.2% of respondents reported, that they are not used iodized salt. It could be assumed, that some of these last

respondents are used not iodized salt, and another part – iodized salt used occasionally and not iodized salt used usually. The not iodized salt some respondents may be having as a previous reserve or it could be obtained in the Lithuanian markets.

Up to 1 of January 2005 iodized salt was used by 43.7% of Lithuanian respondents (45.4% of females and 40.9% of males). According to our data from Actual Nutrition and Health Behavior Study in 2001-2002, iodized salt was used by 39% of respondents (50% of females and 35% of males).¹; according to the similar study in 1998, iodized salt in Lithuania for the food was used by only 5-10% of respondents.

The data on usage of iodized salt according to the age, nationality, education, residence and employment are presented in tables No1-5.

In order to obtain some data on importance of iodine and iodized salt to human health the respondents were requested to give some answers to the some food claims due to iodine in human nutrition (the table No 6). Unfortunately, approximately only 75% of respondents were informed about the importance of iodine and importance of iodized salt to human health. About the claim, that in Lithuanian soil and Lithuanian water was no sufficient iodine amounts know about 40% of respondents. Therefore it is necessary in the future also to assure the sustainability of educational activity with Lithuanian population, namely it is reasonable to prepare and publish the recommendations as well as the leaflets with information about the importance of iodine and iodized salt to human health.

Some results of previous investigations, prepared by National Nutrition Center in 2002.

According to the data from Actual Nutrition and Health Behavior Study in 2001-2002 (n = 3000), with food and food products Lithuanian respondents consumed approximately (per day) $120.8 \pm 117.3 \mu\text{g}$ of iodine (males - $136.6 \pm 104.1 \mu\text{g}$, females - $104.4 \pm 104.1 \mu\text{g}$). The urban females consumed only $96.7 \pm 102.6 \mu\text{g}$ of iodine, while the recommendation amount is about $150 \mu\text{g}$.

Conclusions:

- In September – October of 2005 the iodized salt in households used 67.8% of Lithuanian respondents
- In order to achieve, that at least 80% of household will use the iodized salt for food it is necessary:
 - ✓ to continue the educational activity with Lithuanian population, namely to prepare and publish the recommendations as well as the leaflets with information about the importance of iodine and iodized salt to human health
 - ✓ to assure the sustainability of undertaken measures devoted to eventual elimination of IDD in Lithuania
 - ✓ to organize the broad cooperation between nongovernmental organizations, policy makers, scientists from Lithuanian universities, in order to eliminate of IDD in or country
 - ✓ to organize the sustainable and scientific iodine monitoring system

Table No 1. The usage of iodized salt according to the age

The age group (in years)	Used iodized salt	Not used iodized salt
Until 30	50,0%	50,0%
36-40	75,0%	25,0%
41-45	72.2%	27.8%
46-50	78.1%	21.9%
51-55	63.5%	36.5%
56-60	66.7%	33.3%
Over 60	62,7%	37,3%

Table No 2. The usage of iodized salt according to the nationality

Nationality	Used iodized salt	Not used iodized salt
Lithuanian	67,7%	32,3%
Russian	72,2%	27,8%
Polish	70,0%	30,0%
Others	42,9%	57,1%

Table No 3 The usage of iodized salt according to the education

Education	Used iodized salt	Not used iodized salt
Primary and not completed secondary	44,0%	56,0%
Secondary	66,3%	33,7%
Special secondary	69,1%	30,9%
High	75,0%	30,0%

Table No 4. The usage of iodized salt according to the residence

Residence	Used iodized salt	Not used iodized salt
Urban	70,4%	29,6%
Rural	60,9%	39,1%

Table No 5. The usage of iodized salt according to the employment

Employment status	Used iodized salt	Not used iodized salt
Employed	71,4%	28,6%
Not employed	54,4%	45,6%
Retired	65,0%	35,0%

Table No 6. The answers of respondents concerning the food claims

	True answer	Wrong answer	Do not know
1. Iodine is essential trace element for every human	77,1%	0,9%	22,0%
2. Iodine is essential for the function of thyroid gland	74,7%	-	25,3%
3. There is no iodine in Lithuanian fresh water and soil	40,1%	7,2%	52,7%
4. In order to avoid the iodine deficiency it is necessary to use iodized salt instead of common not iodized.	72,3%	6,3%	20,8%

Annex 4: Lithuania

Annex 4.1

Monitoring the program of iodine supplementation in Lithuania based on the neonatal screening for congenital hypothyroidism Report January-December 2004

This report analyses the national neonatal TSH screening data for 2004 in Lithuania. National screening for congenital hypothyroidism was performed by measuring TSH in dried blood spots collected on filter paper by fluorometric enzyme immunoassay method, Floroscan Ascent Neonatal, Labsystems, Finland. Results were analysed by Ascent software 2.2.4 version. The results for 29.226 TSH blood spots remained for analysis, representing 99% of all registered births in Lithuania during the observation period. Screening was performed in Centre for Medical Genetic, Vilnius University Hospital Santariskiu Clinics.

According the data of TSH in neonatal screening for CH frequency of neonatal TSH above 5.1 mIU/L was calculated.

Table 1. Data of newborns tested and number and frequency of case TTH>5.1 mIU/I in municipalities of Lithuania based on the neonatal screening for congenital hypothyroidism

Municipality	Newborns tested-2004	Number of case TTH>5.1 mIU/I	%
Alytus city and district	691	39	5,70
Anykščiai district	179	8	4,50
Biržai district	208	15	7,28
Ignalina district	16	3	18,75
Jonava district	272	19	7,11
Joniškis district	232	46	18,94
Jurbarkas district	218	25	11,57
Kaišiadorys district	214	14	6,66
Kaunas city and district	5812	320	5,52
Kelmė district	235	10	4,71
Kėdainiai district	388	17	4,40
Klaipėda city and district	2821	103	3,62
Kretinga district	399	16	4,06
Lazdijai district	286	18	6,45
Marijampolė district	645	23	3,63
Mažeikiai district	609	18	3,11
Panevėžys city and district	1551	57	3,71
Pasvalys district	367	14	3,93
Plungė district	263	3	1,14
Prienai district	187	30	16,20
Radviškis district	416	15	3,53
Raseiniai district	278	17	6,20
Rokiškis district	226	12	5,33
Šakiai district	236	29	12,30
Šalčininkai district	247	12	4,97
Šiauliai city and district	1979	56	2,83
Šilalė district	173	7	4,19
Šilutė district	415	77	18,60
Švenčionys district	185	9	4,94
Trakai district	360	23	6,38
Tauragė district	346	27	8,03
Telšiai district	439	19	4,58
Ukmergė district	331	17	5,20
Utena district	331	17	5,20
Varėna district	202	7	3,50
Vilkaviškis district	326	11	3,48
Vilnius city and district	6830	355	5,15
Visaginas city	235	9	3,87
Zarasai district	78	28	35,89
Total:	29 226	1545	5,28%

For 2004 the prevalence elevated TSH ($>5\text{mIU/L}$) was 5.28% and this percentage is from 1.14% to 35.89%. A variation was apparent among administrative regions in the country, with the highest proportion of elevated TSH in Zarasai district, and the lowest in Plungė district.

Using WHO/UNICEF/ICCIDD criteria, these findings confirm that the population in Lithuania is mildly iodine deficient, which exposes newborns to the risk of brain damage, mediated through inadequate thyroid hormone supply to the developing brain cells during fetal and early neonatal life. The existent national neonatal TSH screening offers a solid and comprehensive database for semi-annual reporting on national progress to ensure optimum iodine nutrition in the population in Lithuania.

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Annex 4.2

Monitoring the program of iodine supplementation in Lithuania based on the neonatal screening for congenital hypothyroidism“ January-June 2005

This report analyses the national neonatal TSH screening data of the first half of 2005 year in Lithuania. National screening for congenital hypothyroidism was performed by measuring TSH in dried blood spots collected on filter paper by fluorometric enzyme immunoassay method, Fluoroscant Ascent Neonatal, AniLabsystems, Finland. Results were analysed by Ascent software 2.2.4 version. The results for 14,428 TSH blood spots remained for analysis, representing 99% of all registered births in Lithuania during the observation period. Screening was performed in Centre for Medical Genetic, Vilnius University Hospital Santariskiu Clinics. According the data of TSH in neonatal screening for CH frequency of neonatal TSH above 5.1 mIU/L was calculated.

Table 1. Data of newborns tested and number of case TSH > 5.1 mIU/I in municipalities of Lithuania based on the neonatal screening for congenital hypothyroidism-2005

Municipality	Newborns tested-2005	Number of case TSH>5.1 mIU/I
Alytus city	300	20
Akmenės district	29	0
Anykščiai district	85	1
Biržai district	94	2
Jonava district	143	8
Joniškis district	106	7
Jurbarkas district	110	6
Kaišiadorys district	96	1
Kaunas city and district	3016	129
Kelmė district	89	6
Kėdainiai district	165	1
Klaipėda city and district	1456	58
Kretinga district	153	2
Lazdijai district	138	4
Marijampolė district	260	13
Mažeikiai district	286	10
Panevėžys city and district	802	32
Pasvalys district	160	3
Plungė district	111	2
Prienai district	77	14
Radviliškis district	191	8
Raseiniai district	144	8
Rokiškis district	111	4
Šakiai district	100	7
Šalčininkai district	143	3
Šiauliai city and district	936	26
Šilalė district	84	5
Šilutė district	191	72
Švenčionys district	89	0
Trakai district	189	4
Tauragė district	150	11
Telšiai district	217	4
Ukmergė district	182	6
Utena district	173	8
Varėna district	65	1
Vilkaviškis district	152	8
Vilnius city and district	3463	184
Visaginas city	170	11
Zarasai district	2	1
Total:	14 428	690 (4,78 %)

The prevalence of elevated TSH (>5.1 mIU/L) was 4.78% for the the first half of 2005 year.

A variation was apparent among administrative regions in the country, with the highest proportion of elevated TSH in Zarasai and Šilutės districts, and the lowest in Akmenės and Švenčionys districts.

Using WHO/UNICEF/ICCIDD criteria, these findings confirm that the population in Lithuania is mildly iodine deficient, which exposes newborns to the risk of brain damage, mediated through inadequate thyroid hormone supply to the developing brain cells during fetal and early neonatal life. The existent national neonatal TSH screening offers a solid and comprehensive database for semi-annual reporting on national progress to ensure optimum iodine nutrition in the population in Lithuania.

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